UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WISCONSIN
MILWAUKEE DIVISION

SHEILA GARD, et al.,	)	
Plaintiffs,	)	Case No. 20-CV-256
vs.	)	Milwaukee, Wisconsin
UNITED STATES OF AMERICA, et al.,	)	March 4, 2022
	)	8:40 a.m.
Defendants.	)	

TRANSCRIPT OF COURT TRIAL - **EXCERPT**
BEFORE THE HONORABLE NANCY JOSEPH
UNITED STATES DISTRICT JUDGE

APPEARANCES:

For the Plaintiffs

Gruber Law Offices, LLC
By: MR. ERIC M. KNOBLOCH
and MS. PATRICIA A. STONE
100 East Wisconsin Avenue
Suite 2800
Milwaukee, Wisconsin 53222
Ph: 414-977-1691
emk@gruber-lawcom
patriciastone@gruber-law.com

For the Defendant

United States Dept of Justice
(ED-WI)
By: MR. BRIAN E. PAWLAK
Office of the US Attorney
517 East Wisconsin Avenue
Room 530
Milwaukee, Wisconsin 53202
Ph: 414-297-4134
brian.pawlak@usdoj.gov

U.S. Official Court Reporter: THOMAS A. MALKIEWICZ, RMR, CRR
Proceedings recorded by computerized stenography, transcript produced by computer aided transcription.

I N D E X

E X H I B I T S

TRANSCRIPT OF PROCEEDINGS

(REPORTER'S NOTE: The following is an excerpt of the proceedings.)

THE COURT: All right. Please proceed.

08:40 MR. PAWLAK: Government calls Dr. Maiman to the stand.

THE CLERK: Would you raise your right hand, please? Do you solemnly affirm that the testimony you are about to give will be the truth, the whole truth, and nothing but the truth 08:56 under the penalties of perjury? If so, please answer I do.

THE WITNESS: I do.

DENNIS MAIMAN, M.D., called as a witness herein, after having been first duly sworn, was examined and testified as follows:

08:41 THE COURT: Could you state and spell your first and last name for us?

THE WITNESS: Sure. Dennis Maiman. D-E-N-N-I-S, M-A-I-M-A-N.

DIRECT EXAMINATION

08:41 BY MR. PAWLAK:

Q. Good morning. Sir, please tell us what your profession or occupation is.

A. I am a neurosurgeon.

Q. And describe your background, please.

08:41 A. Sure. I have a bachelor's degree from UWM. I went to

08:41 medical school at the Medical College of Wisconsin, did a residency in neurosurgery at the Medical College of Wisconsin. Obtained a Ph.D. in biomedical engineering and biomechanics from Marquette University and an MBA from the University of
08:41 Wisconsin-Parkside.

Q. Are you currently a practicing physician?

A. I see -- I'm semi-retired. I see patients a half day a week -- half day every other week, and that's going to increase now that the pandemic has hopefully closed, and I also do
08:42 research in biomechanics.

Q. And you've been affiliated as a professor at the department of neurosurgery at the Medical College of Wisconsin; is that correct?

A. Yeah, I was faculty my entire career, or I have been my
08:42 entire career. Went through the ranks, became chairman in 2009, stepped down as chairman in 2015. 2016? 2015. And at the same time stopped -- decided to stop operating. And since then I've done just office practice and research, and some teaching and a lot of mentorship.

08:42 Q. Describe when you say teaching, what do you mean by that?

A. Well, I get involved with -- with more graduate students interested in the health than residents in teaching about biomechanics and the relationship to the spine and spinal disorders.

08:42 Q. And overall, so how many years have you been working in

regards to the human spine?
A. I'm sorry?
Q. How many years have you been working in regards to the human spine, either doing surgeries or teaching?
A. Well, if you include residency, it's about 45 years.
Q. All right. And I'm going to -- In front of you is Government's Exhibit 1003, for those of you, that's found in the Government's binder and it's Exhibit 1001 through 1006. Do you see that in front of you, Dr. Maiman?
A. Yes.
Q. And can you tell us what that is, please?
A. That is a very old curriculum vitae.
Q. Now, it's dated May 31st, 2016; is that correct?
A. Yes.
Q. And it is 50 pages long; is that accurate?
A. That one is, yes.
Q. Now, is there anything that you would like to add to that CV since it's so old to bring us up to date?
A. Well, I have more publications since then. Probably at least half a dozen, maybe 10 more scientific papers. And see if there's anything else here. It ends with me as chairman in 2015. I -- I would probably add on my current roles as professor or professor emeritus of neurosurgery. I no longer have -- I resigned all my hospital staff privileges somewhere around 2017.

08:44 Q. Okay. Very good. Thank you. Now, just so I understand, as a professor at the department of neurosurgery, did you teach other would-be neurosurgeons?
A. I did. I mean, until I -- until I stepped down. Frankly, 08:44 teaching neurosurgery residents is predominantly in the operating room, and when I stopped operating, that just seemed to be a good time to leave off. And I left enough people on that we had trained that there was really no need for me to be involved in that that much.
08:45 Q. How many years did you actually do that, do you estimate?
A. My entire academic career.
Q. Which, again, please, how many years?
A. I became an assistant professor in 1982 and stepped down as chair in fall of 2015.
08:45 Q. And do you have an estimate of how many other neurosurgeons that you taught to do neurosurgery?
A. Oh, hundreds. I mean, I had 34 fellows, we had hundreds of residents.
Q. Now, you were retained in this case by the defendant to 08:45 review medical records in regard to the plaintiff in this case, Sheila Gard; is that correct?
A. Yes.
Q. And you've done that?
A. I have.
08:45 Q. And in that regard, you compiled a written report at the

Government's request; is that correct?
A. Yes.
Q. I direct your attention to the next document in the binder in front of you marked as Government's Exhibit 1004. Do you see that, sir?
A. Yes.
Q. And is that your report?
A. Yes.
Q. And are your opinions in that report, were they rendered to a reasonable degree of medical certainty?
A. Yes.
Q. In regard to Ms. Gard, what was the -- And you're familiar with Dr. Dagam who was the surgeon in this case?
A. Yes.
Q. How were you familiar with him other than this case, if at all? Just generally speaking.
A. Just he's another neurosurgeon in Milwaukee. It's not that big of a circle.
Q. And what does -- what does one have to do or attain to actually be able to claim the title of neurosurgeon?
A. Well, once one becomes a physician, we do a residency, which is a training program, of course, with varying years. It's currently seven years, I believe. You are then a board eligible neurosurgeon. You then have to take a written exam and an oral exam in order to become board certified.

08:47 Q. Very good. Thank you. And in regard to this case, you reviewed all of Dr. Dagam's notes; is that correct?
A. Yes. The ones that I have, yes.
Q. Yes. Very good. Just the ones that were made available
08:47 to you, whether you had secret notes, you would have no idea, you didn't get those?
A. No.
Q. And you reviewed images, x-rays, MRI's that were provided through the Aurora facility, the Aurora -- I'm not sure what we
08:47 should call them, the cluster, the business entity known as Aurora?
A. I believe -- I reviewed images, yes.
Q. Yes. Okay. Now, I know this becomes a little more complicated and detailed. What -- How would you describe the
08:47 surgery that Dr. Dagam actually performed?
A. He did an -- May I?
Q. Surely. Note for the record that Dr. Dagam [sic] brought in a demonstrative exhibit which you can describe.
A. Maiman.
08:48 Q. Maiman. I'm sorry.
A. So this is a $31 Amazon model of the cervical spine, and it's anatomically incorrect in that it does not have the normal curve of the cervical spine, it's actually fairly straight, which is -- they didn't want to spend the money to bend the
08:48 rod.

When we look at the cervical spine, we have the vertebral body or the corpus here, we have a disk here, and a vertebral body here. Now, the disks serve as shock absorbers, and in between the vertebral bodies are also ligaments which are tough tissues that limit the amount of motion allowed at any given segment of the spine.

When we go to the back of the spine, because we're going to talk about this more later anyways, we have bones in the back, the lamina -- lamina is Latin for shingle -- which goes across the back of the spine; and we have joints called facet joints, just like diamonds have facets, so does the spine. And what they do is they allow, again, a certain amount of motion, but they prevent excess motion.

Coming out of the spine then through the holes called the foramina -- foramen is Latin for hole -- are nerves that go to the arms. In the operation that Dr. Dagam did in this case, he removed the disk -- I need some sort of a pointer, my finger's too fat -- he removed the disk and cleaned up the bone spur at the edge of the nerve hole, the foramen, and then he placed in a small titanium mesh cage filled with bone from this area. It's called an anterior cervical decompression and fusion.

Q. And have you yourself personally performed that surgery?

A. I've done thousands.

Q. Thousands?

A. Thousands. At least a couple thousand.

Q. And you've instructed other neurosurgeons in how to perform that surgery?
A. Yes.
Q. Okay.
A. It's one of the most common operations in neurosurgery.
Q. Very good. Now, up in front of you on a screen is x-rays identified as being of Ms. Gard taken on March 27th, 2017, and you've reviewed that image before, have you not?
A. Yes.
Q. So this would've been just three days after the accident that Ms. Gard, which is the basis for this litigation, and you're familiar with that, correct?
A. Yes.
Q. Tell us what is relevant or pertinent about what we can see up there on that screen.

MR. PAWLAK: And, Judge, Dr. Maiman has asked with your permission to be able to walk down to that screen and point at things.

THE COURT: You may.

THE WITNESS: Thank you. So in the left image, we have a side view of the cervical spine, and there are three things, four things that are immediately evident. First of all, the spine is straight. Normally the cervical spine is not straight. It has what's called a lordotic curve, a nice gentle sweeping curve.

08:51 Now, there are three reasons why the spine might be straight. Number one reason is she may have been born that way, which is unlikely. There are certain number of people that are, but I don't think that is the case here.

08:51 Number two reason is because as the spine degenerates, and I don't want to use that term pathologically because wear and tear changes happen to everybody and probably at least 75 percent of the people in this room, it's part of life. Where the disk starts to just wear out and the facet joints 08:51 start to wear out as well, and so then the spine becomes straight because it doesn't happen at an even rate; in other words the only way that the spine would maintain its curve if all the changes in the spine are occurring at the same rate, which doesn't typically happen.

08:52 The third reason that this can happen that the spine can become straightened would be as a direct result of the trauma, and that is that as you develop spasm in the muscles in the back of your neck and your upper shoulders in the trapezius, it kind of pulls the curve away, so we have three reasons for 08:52 that. In addition, at C-1, C-2, C-3, C-4, C-5, C-6, and C-6, 7, we -- we see changes in the disks themselves.

If you look up higher, there's a nicely maintained disk space with a nicely maintained end plate, this is called the end plate, which is where the attachment to the disk occurs. 08:52 However, at C-5 and C. -- C-5, 6 in between these two vertebra

and C-6, 7, it's a big -- I thought you did that on purpose. It's a little bit more irregular, and the space is a little bit collapsed, and you see a little bit of a boney ridge here in front. In a sense that's almost a body's attempt to do a fusion on itself; it's one of the things that we do.

When we look at the second view here, we're looking at the foramina. I mentioned earlier there's a nerve hole called the foramina where the nerves come out to the arms. Now, the spinal cord and the nerves are like a telephone cable with branches coming out into the individual holes, and these are the foramena where the nerves come out. These can be narrowed by -- by bone spurs caused by old disk bulging here and here. And indeed at C-5, 6, we do see some narrowing of the foramen as compared to the ones up above it.

So there are some changes that are evident three days after the trauma, after the crash. The boney changes, of course, preexist the crash. Only possible change that resulted from the crash is straightening from spasm.

Q. Now, when you talk about a spasm, is that something that's temporary, that's the muscle contracting? If you could elaborate on that, please?

A. Sure. It's a response to trauma. You know, people make fun of the phenomenon called whiplash, but it's very, very real. If you take a muscle beyond its normal capacity, you strain it, it causes some -- some micro damage to the muscles

themselves. There may be some bleeding in them, may be muscle fibers that are stretched or even torn. And as a result of that, there are nerve fibers in the muscle, and that will produce pain. So that is typically temporary. Now, we've all had muscle strains, we all have had muscle -- what's called myofascial syndromes, and they usually get better.

Q. Is that what happened as a result of this accident? Was it whiplash?

A. I -- I hesitate to use the term, again, because it has a negative connotation, although it's very real. She definitely had what's called a myofascial syndrome, or myofascial injury, which means again that the muscle and the tissues surrounding the muscles and supporting them had -- were strained and probably at least microscopically damaged.

Q. But those were the muscles?

A. Those are the muscles.

Q. Okay.

A. As far as the spine itself is concerned, as I've said previously, there are tiny little nerves in the facet joints, you remember the joints on the side of the spine, and those can be irritated in a -- in a traumatic event since there already is some degeneration, they can be traumatized in a neck and that can produce neck pain as well and that will produce neck pain because it causes more spasm in the muscles.

Q. And as you look at this x-ray, is there evidence of acute

damage?
A. Damage? No.
Q. No. What causes the foraminal, if I pronounced that correctly, narrowing?
A. When -- As we -- As we age, and we hopefully don't do, the disks lose some of their capacity. The disk is composed significantly of water, and then of certain kinds of gels. As these become -- As the water leeches out of the disk, which happens over decades, and as the disk becomes less capable, it will bulge, and those bulges will turn on a long term basis into calcium. In addition, the ligaments that support the spine will thicken over time as they become less capable, and that will -- between the two of them they -- they will cause a narrowing of the foramen.
Q. Has it been appropriate or correct to use the word "degenerative" in the sense that these are just normal degenerative changes?
A. I mean, they're degenerative. They're not -- They're wear and tear. So it -- degenerative is a term we use.
Q. Okay. And directing your attention to Government's Exhibit 1004, your first paragraph, you, in fact, note that in your report stating, quote, "X-rays of the cervical spine demonstrated degenerative changes at C-5, 6 and straightening of the normal cervical lordosis consistent with spasm and acute pain." Do you see that, Doctor?

A. I do.
Q. All right. Was that accurate, what I stated?
A. I think so, yes.
Q. All right. Thank you. Now, you had an opportunity approximately a year later, I believe, to look at an MRI which was dated April 27th, 2018; is that correct?
A. Yes.
Q. Now, can I have a moment, please? All right. So I'm going to direct your attention to what has Government's Exhibit 1017 --

MR. PAWLAK: Judge, and you won't have this in your binder, and I'll give an explanatory note, if I may. This is a series of MRI's, and there's approximately 450 or 350 images on here, so this is only available in this special sort of platform.

THE COURT: Thank you.

BY MR. PAWLAK:
Q. I believe, Dr. Maiman, you had indicated to me that -- Oh, there it is. Okay. Here we go.
A. You went too far.
Q. Too far?
A. Keep going. You can go a little bit further. You're going to the T-2 images.
Q. I thought you had mentioned --
A. I did.

Q. Right there?
A. One more.
Q. I thought you had mentioned you wanted to see 129 through 131, but --
A. There you go. You're fine right there.
Q. Okay. What I'm showing now is image 129 of 317 on here. Can you tell us what we're seeing?
A. May I --
Q. Yes.
A. -- Your Honor?

THE COURT: Yes. Yes, you may. Thank you.

THE WITNESS: So this is -- this is a T-2 sagittal section, slicing -- slicing it like a croissant this way. And this is the front of the spine, this is the back of the spine. These are vertebral bodies, these are the disks. Here's the spinal cord coming out of the brain, and then as I mentioned, there are ligaments in the back and in the front of the spine here at C-5, 6, which is the area of --

Well, let's look at the characteristics of the disks first. A normal healthy disk has this whitish in the middle which reflects the water content. At C-5, 6 we do see some water here, but overall her disks are fairly degenerated. That has to do with something that she probably doesn't even know that she has, which is scoliosis in the thoracic spine.

But what we see here is a thickening of ligaments right

here at C-5, 6. With some disk bulge. That on the axial views -- Do you want to go to the axial view, please? Cross-section views?

BY MR. PAWLAK:

Q. Do you know what number that is? Or keep advancing in the same direction?

A. Yeah, you're advancing it. I don't know.

MR. PAWLAK: Keep advancing it, Keke.

THE WITNESS: It really shows the picture better. Keep going, slowly.

MR. PAWLAK: Try 218 to 221 range.

THE WITNESS: Perfect. So this is an axial view or cross-section view slicing like a salami, and I'm not being funny. Here's the front, here's the -- this is probably trachea, windpipe, and here we have the vertebral body. This is a T-2 weighted cut, which is designed to show nervous structures better than boney structures, but it gives us the information that we need.

Here's the spinal cord coming out of the brain. The white structure stuff is spinal fluid around the spinal cord, which we want to see. That's the nutritional and protective environment, it's almost like a -- like a bathtub for the spinal cord.

When you look at the -- the -- When you look at the vertebral body itself, which is right here, you see that

there's a nerve root coming out of here. This is the left and this is the right.

Now, the nerve hole for the right, the nerve looks very happy here, but there's an asymmetry here that you can perceive, and this is an example of an -- what an osteophyte looks like or what a bone spur looks like right here. You have a thickening ligament, and it's slightly darker, and you can see how thickened it is. There's an old bulging disk, which is ancient. It's actually turned to calcium. And it is narrowing the foramen, but not in a direction that affects the nerve. It can affect the nerve, but it's not. So this is what an osteophyte looks like on an axial view, on a cross-section view.

BY MR. PAWLAK:

Q. Is there any additional images you'd like to point to on this MRI?

A. Do you want to go down one more?

Q. To 217?

A. So this one's a little bit even cleaner in that it shows some stuff going on in the left side too. Interestingly enough here's the nerve going to the left, and again the nerve still has plenty of room, but you've got thickening with the ligament here, which is causing compromise or narrowing of the nerve hole. Of the foramen.

Q. And once again those are all -- those are all natural

09:03 degenerative changes?
A. In a study by Gore, from Sheboygan, interestingly, two of them he followed patients for 10, 15 years, he found this sort of stuff in virtually everybody. Most of the studies have
09:04 going way back into the fifties. Anybody over the age of probably into the forties.
Q. And does that narrowing cause -- have anything to do with Ms. Gard's pain?
A. Only inasmuch as the facet joints are part of the complex.
09:04 In other words the narrowing itself is not, because if the narrowing itself was involved in her -- in her symptoms, she'd be having radicular pain or pain going down her arms, which she does not have. And did not have.
Q. So what is the consequence or significance of the
09:04 narrowing over time?
A. None. In and of itself, none.
Q. But what's in terms of Ms. Gard's condition, you're aware of her complaints of pain and stiffness and so forth, correct?
A. Yes.
09:04 Q. Is there any relationship between that degenerative narrowing and her symptomology?
A. Well, I -- I think that the wear and tear, the degenerative changes, how do I say this, sort of they're not the cause of the pain, but they -- they facilitate the pain
09:05 from the trauma, if you were.

I mean, if you say would a perfectly normal 20-year-old spine be at as high of risk of having the pain that she has, the answer would be no. There's no question that degenerative changes play into the -- into the ability to have the pain.

Q. Could you elaborate on that just a little bit?

A. I'm struggling. The compliance, translating it into English. The ability of the absorptive of the disk, the -- the anatomy of the facet joints when they're perfectly formal are more -- are more resistant to the kinds of pain problems that she has than those of us who have wear and tear changes in our spine. So we're at higher risk, if you will, if we have these changes.

Q. Okay.

A. And I include myself because I obviously have them.

Q. Now, you're aware that Ms. Gard was directed to participate in physical therapy as a result of this accident; is that correct?

A. Yes.

Q. And based upon your training and experience and knowledge, was this sound advice for her to help deal with her issues from the accident?

A. Yes.

Q. Can you elaborate on that, please?

A. Sure. There's very, very good evidence that all over the scientific literature that an aggressive nonoperative treatment

program, including physical therapy, often including chiropractic treatment, will lead to significant improvement in pain.

Q. And in order to participate in physical therapy, one needs to follow the prescription of, for example, showing up and actually participating in the physical therapy on a regular basis?

A. Well, you need to be trained in the exercises, you need to do the exercises, and you need the professional expertise to facilitate to make that happen.

Q. And in your review of the records for Ms. Gard, she had significant difficulty in actually fulfilling her obligations to participate in the physical therapy; is that correct?

A. In several places in the record it indicates that she had difficulties because of her work schedule to participate in the therapy.

Q. Now, if Ms. Gard had, what can you tell us -- what's your opinion as to whether Ms. Gard had completed and aggressively pursued her physical therapy, could she have eliminated or significantly reduced the pain that she was suffering?

A. I think she -- You know, speaking to a reasonable degree of medical probability, she would have benefited significantly from a more involved nonoperative treatment program.

Q. And if you were Ms. Gard's surgeon in this case, you would've recommended that she would've engaged in physical

therapy; is that correct?
A. I wouldn't have even seen her without --
Q. I understand. But -- Okay. Let me rephrase the question. If you had been involved in this case and you knew -- If you had been one of her -- or on her treating team, let's call it that, would you have recommended that she participate in physical therapy?
A. Strongly.
Q. All right. I'm going to direct your attention to the surgery that took place on this case on December 24th, 2019. Do you have an opinion as to whether or not the surgery that Dr. Dagam conducted in this case was appropriate?
A. I have an opinion.
Q. Could you provide it to the Court, please?
A. There's absolutely no evidence that cervical fusion for axial pain is a benefit to most patients. The indications for cervical fusion, and I had afforded some -- during my deposition I had mentioned some -- some guidelines that have been produced, the spine organizations that surgical treatment, including fusion, is indicated for gross instability, that is, where the spine isn't holding together well, for pressure on the spinal cord, for pressure on the nerves. That's pretty much about it.

And axial pain, meaning neck pain, just doesn't respond to fusion very well. In fact, there have been a few papers that

09:10 suggest that the complication rate and the long term negative outcome is -- is higher than the small percentage of patients who do indeed improve.

Q. Thank you. One moment, please. Doctor, what is the North
09:10 American Spine Society?

A. The North American Spine Society is the largest spine group in the United States and one of the two largest in the world. It is a group of orthopedic spine surgeons, neurosurgeons, physiatrists, meaning rehab doctors,
09:11 chiropractors, therapists, psychologists, and even social scientists who are interested in spinal disorders and researchers, Ph.D. researchers as well, so it's a big group, and, yes, I'm a member. I used to be more involved than I am now. A couple of my former trainees have been president.
09:11 It's -- It is, again, the -- probably the definitive spine organization in the hemisphere.

Q. And in your opinion is this a worthy organization for a neurosurgeon to belong to?

A. Yes.

09:11 Q. And could you tell us why?

A. Well, because they work very hard to bring forward the science. It doesn't mean that everybody has to belong to it, you can only belong to so much, but it's a good group.

Q. For brevity sake I'm going to show you what's been marked
09:12 as Government's Exhibit No. 1029, which is found in the binder

09:12 marked Exhibit 1007 through 1029. And I'm going to show you a document -- That exhibit is marked as defining appropriate coverage positions, cervical fusion, and I'm going to show you what's marked on page three and direct your attention to the 09:12 title called clinical criteria for the procedure. Have you seen that document before?

A. Yes, I have.

Q. And can you explain generally what it is?

A. So the North American Spine Society in addition to 09:12 advancing the science is very involved in advocacy and in setting fees in conjunction with the Government. There are several surgeons and non-surgeons who participate in the process of determining appropriate coverage and indeed battle for surgeons to get things covered when new procedures come 09:13 out.

As part of their activities the North American Spine Society has developed evidence based guidelines, meaning guidelines for the performance of certain procedures that are based on scientific valid data incorporating hundreds of 09:13 thousands of cases using our best artificial intelligence as well as simple data. They've developed criteria for several operations, to not only for our purposes as physicians but also to assist payors and others in determining what's appropriate and what's not appropriate in the medical world.

09:13 Q. And so do they have a list, if I can use the term,

checklist as to when the surgery that Dr. Dagam performed would be appropriate?

A. Yes.

Q. Could you describe or list -- or just tell us what those items would be or the symptomology or conditions?

A. Well, they say infection, of course, tumor, traumatic injury, which I discussed earlier, which is instability of the spine and meaning it's not hold together. Deformity, meaning when the head's bent forward on the chest, and we've seen people like that, pressure on the spinal cord, causing partial paralysis or weakness. Radiculopathy, meaning pressure on a nerves causing problems in the arms -- in the arms. And, non-traumatic instability, so changes in the spine that aren't due to trauma which are usually congenital, that -- that produce abnormal movement and put the spine -- spinal cord at the -- the nerves at risk.

Q. Now, does it also say when the surgery should not be performed for a condition for symptomology?

A. Yes.

Q. When would that be, sir, in relation to this case?

A. Well, one is cervical radiculopathy or nerve pressure, which is due to a little narrowing but no other problems in the spine, which can be handled much more simply.

And then the other one is what's called discogenic or axial neck pain, meaning that there's just neck pain without

x-ray evidence of root or spinal cord compression, instability, or deformity.

Q. So this axial neck pain, is that what Ms. Gard was suffering from?

A. Yes.

Q. So just to be clear, the society recommends against this surgery for Ms. Gard's condition?

A. That's correct.

Q. Now, when Dr. Dagam testified, I asked him about this, and he opined that if you were a four star Michelin chef you don't need a cookbook in comparison to whether or not a trained neurosurgeon should defer to these kinds of checklists. Do you have an opinion on that?

A. What? I don't know what that means.

Q. Well, I think it means essentially that if you're someone like Dr. Dagam and you have all the knowledge you don't need to defer or look to another agency or someone else's recommendation, but that's my opinion.

A. Again, these guidelines are based on -- on a group of people who are among the best minds in the field, but it's not their opinion, this is based on, you know, tons and tons and tons of data. To ignore the literature -- To ignore the scientific literature, doctors are supposed to keep learning, and to ignore the scientific literature is highly inappropriate.

I certainly changed my practice over the decades and I've changed my attitudes over the decades. And I ain't a four star, but I did okay. And I -- I -- I don't know where he's coming from.

Q. Now, in the field, do you have an opinion as to whether or not what you've just testified to regarding what's in the publication from the North American Spine Society that that's generally accepted by the neurosurgeon -- the collection of generally accepted principles for neurosurgeons?

A. And orthopedic spine surgeons, yes.

Q. All right. If you had been Ms. Gard's surgeon in this case, would you have recommended that she undergo this surgery?

A. No.

Q. And why?

A. Because the literature is clear that it doesn't do much. I mean, it doesn't lead to significant improvement in pain. And I would've sent her back for an aggressive nonoperative program. I might well have sent her to a chiropractor as well, in fact, I probably would have and I would've pursued with pain management.

Q. Now, before Ms. Gard had her surgery, and during and after her PT, she also underwent various other pain reduction procedures with Dr. Ong; is that correct?

A. Yes.

Q. What's your opinion on those?

09:18 A. The facet -- She had facet injections which gave her substantial temporary improvement, which is what you expect. It's a good adjunct, in other words it's not going to solve the problem, but it can be a valuable contribution to making things 09:18 better.

She did not have, as I recall she didn't have the epidurals, which is injecting steroids into the nerves instead of the joints, and she didn't have them and, frankly, they would not have done her any good, but the -- the facet 09:19 injections were at least temporarily helpful.

Facet rhizotomy, meaning burning the nerves, if you will, would -- may have -- would likely have been equally helpful and promoted the ability to do -- for the other improvement.

Q. Okay. All right. You should have another binder up there 09:19 that should be Exhibit 1000, part one of four. It's a larger one. Do you have that one?

A. I don't know what I have here.

Q. Yeah, I think I -- it should be -- I'll double-check for you.

09:19 A. Getting a little crowded here. Need a bigger desk.

Q. Yes. It's this one. And I've marked -- premarked the pages for you. If you'll turn to page 77. For the record that's Gard 77, Exhibit 1000, part one of four, and that's the operative procedure report from Dr. Dagam; is that correct?

09:20 A. Yes.

09:20 Q. You've seen that document before?
A. Yes.
Q. And generally speaking what is that document that Dr. Dagam created there?
09:20 A. An operative report is designed to let anyone who wants to know exactly what was done in the operating room.
Q. So tell us what Dr. Dagam said that he did that day in the operating room.
A. He said he took out half of the vertebra or the corpus of
09:20 C-5, half of the vertebra of C-6, actually more than half, he put in a fusion mass, used fluoroscopy, he used an operating microscope, and what's called a stealth navigation system, which is a computerized system to -- to predict where things should go, if you will.
09:21 Q. All right. And did Dr. Dagam in your opinion actually perform the surgeries he's alleging that he performed?
A. No, he did not.
Q. Tell us why.
A. I need the x-rays, please.
09:21 Q. Yes. Which one would you want, Doctor?
A. The postoperative film.
Q. All right. There you go. What I've brought up is the postoperative x-ray from February 20th, 2000 -- excuse me -- February 10th, 2020.
09:22 THE COURT: You may step down, Doctor. You don't

need to ask for permission. You're free to step down as needed. I appreciate it. Thank you.

THE WITNESS: So here we have a side view of the cervical spine postoperative, and this is important. When Dr. Dagam said that he did a 50 percent vertebrectomy, that means he says he removed 50 percent of the height of the vertebral body. And that he removed 50 percent of the bottom of the vertebral body.

If you look at the heights of the vertebral bodies, no, he didn't. He didn't do that. Had he done that, this 14 millimeter -- I can't remember if it was 12 or 14 millimeter implants he put in would've been a 25, 26 millimeter implant. The operation that he did was to connect the cervical spine, it is done from the front, but it is not a carpectomy or vertebrectomy, which again means the same thing.

What he did was he shaved off the end plate at C-5, shaved off the end plate of C-6, which you have to do because you want to try to give bone surfaces in there, and actually shaving off is a bad term, he roughened them up and he placed a device, I'm not familiar with the one he used because there are hundreds of them on the market, looks like it's plastic or some sort of ceramic with a titanium marker in the front and the back to let you know where you are on x-ray, and it's filled with both bone that he took from right here from the bone spur as well as -- as bone substitute.

09:23 He then placed a titanium plate which is well placed, it's fine, and on the front view it's a little bit off to the side, but that's immaterial. I mean, it's okay. But the vertebrectomy was not done.

09:24 Q. Do you have an opinion as to why he called it vertebrectomy when it wasn't?

A. I have none. I don't -- I mean, did he remove a little bit of vertebra? Yeah, you have to in order to roughen it up. You're removing some bone, so in a sense that's scraping as --

09:24 but that's not a 60 percent vertebrectomy, and that's not a 50 percent vertebrectomy. It is not. So you'd have to ask him that question.

Q. Although the procedure that he did is fine, correct?

A. I mean, from a technical perspective, there's -- you know,

09:24 as I mentioned in my deposition, there's a lot of overkill, but it's fine.

Q. But in terms of actually addressing Ms. Gard's symptoms, is this something you would've expected to have any positive effects towards limiting or -- eliminating the symptomology

09:25 from which she was suffering?

A. Again, the literature doesn't support it. I wouldn't -- It wouldn't even come into my head to do this for isolated neck pain. And I don't know anybody whose it would.

Q. I'm actually sort of mystified myself in the sense of this

09:25 particular surgery, what is it designed to rectify that's

causing her pain since her pain is coming from foraminal narrowing, correct?

A. No, pain is not coming from foraminal narrowing, her pain is coming from the muscles, from a lot of muscle trouble as well as the facet joints. I don't know. I -- I, you know, that's -- I can hear my mentor saying, Sanford Larson, you know, the old expression, when all you got is a hammer every problem is a nail, but I -- I can't conceive of doing an anterior cervical diskectomy for isolated neck pain with no instability and no neurological deficit.

Q. Were there any potential negative outcomes, not just the fact that the surgery would be unsuccessful, but with this particular surgery were there any particular alternative negative outcomes?

A. You mean complications?

Q. Yes, complications.

A. People die having surgery. Anesthetic complications happen commonly. Within the specific ones to this procedure, first of all infection, of course, nerve damage. Probably the most common complications are swallowing difficulties and hoarseness due to scarring or injury to the nerves that control the voicebox. Nonunion, the bone not healing proper. She's a nonsmoker, as I recall, so the pseudarthrosis or failure to fuse rate is fairly low, but it does exist, and when it happens, then we get to redo the fusion again. So overall this

09:27 is a -- this is a pretty safe operation, but it still carries complications.

Q. Now, based upon your generations of experience in neurosurgery, do you have any knowledge of common billing practice for this type of surgery?

09:27 A. More than I would like to.

Q. So I'm going to direct your attention, I preplaced it in -- on your -- on the witness stand there, it's Exhibit No. 9, it's actually Plaintiff's Exhibit No. 9, so I can't tell you where to find it, Judge, it's the itemized billing that's been -- was used for cross-examination of Dr. Dagam. Did you find that, Doctor? It's just -- It's a free --

09:28 A. Is it this?

Q. Yes, it is.

09:28 A. Okay.

Q. Take a minute to peruse that, if you would. Are you ready?

A. Sort of, yeah.

Q. So there's two sheets, but sheet one is of my principal

09:29 concern. Dr. Dagam for his self and for his associate here, his physician's assistant he testified that he billed approximately $101,527 for this surgery. Do you have an opinion as to the reasonableness of just the price for what he did?

09:29 A. That's really high.

09:29 Q. Now, he billed this -- he billed it out by the codes for each portion of the surgery. For example, 6301, 6302. Let's address the 6301. Do you -- Do you know that to be the carpectomy of what he --

09:30 A. Yes.

Q. Okay. And, in fact, in your opinion he never even performed a carpectomy, correct?

A. He did not perform a carpectomy.

Q. And for his assistant, the charge was 7,365 and for

09:30 Dr. Dagam it was 20,251. Just for that one code what is your opinion on those approximately $27,000?

A. I'm -- That's unbelievably high.

Q. There was a separate billing here for 22 -- 22551, which in -- during this case we called a fusion, but do you know what

09:31 that code is for, sir?

A. 22551 is an inner body fusion, isn't it?

Q. Yes. And for that he also billed approximately -- billed $20,625 for himself, and for his assistant 7,500.

A. That's unbelievably high.

09:31 Q. And then there's a code for 22845, which during these proceedings we referred to as the plate. Are you familiar with that?

A. Yes.

Q. And for himself he billed $10,519 and for his assistant

09:31 $3,826. What's your opinion on that? The breakdown.

09:32 A. Again, I -- these numbers are staggering for this.
Q. Now, there's a couple other billings in here which are unique in the sense that they were not -- there are two of them, we have a billing code 61783, which Dr. Dagam testified
09:32 to, we called for the purposes of this hearing the use of the stealth or the stealth device, and that was $3,485. Are you familiar with what that -- that code is about?
A. You know, I -- I use the stealth routinely, in fact, we had the first stealth around in -- one of the first ones
09:32 around. The stealth is a very, very valuable technique. Basically what it does is it provides computer directed guidance of surgery, but I've never heard of it being used in the anterior cervical spine before in my entire -- my entire career.
09:32 In the lumbar spine it's extremely valuable, thoracic, but for these purposes, I don't know what you would do with it. You're putting screws in the vertebral body in a premeasured placement. The screws can only go in a certain direction because of the way the plate is arranged, and as long as your
09:33 plate is properly sized, which you do fluoroscopy, I'm not sure what you would do with stealth.
So I can't -- I mean, that's a lot of money for stealth, that is a lot more than we ever charged for using stealth, or currently charge for using stealth, but I'm troubled -- I don't
09:33 understand what its purpose is.

09:33 Q. Thank you. Then charge 69990 is $3,420, and Dr. Dagam testified that was for use of a microscope.

A. We don't bill for using a microscope anymore. That's like -- A microscope is a tool of surgery, and the olden days 09:34 we did that, until I think probably about 2002, 2004, that was routine because it wasn't routine to use a microscope in the operating room. But since it's routine, we haven't charged for that in years.

Q. So if I understand it is this literally Dr. Dagam looking 09:34 in through a microscope and charging $3,400?

A. That's correct, it's using the microscope for doing the decompression, yes. And there are different ways of doing it. Some people do it with loops, with lenses put onto their glasses. Some people do it without anything and some people do 09:34 it with a microscope. It's a tool.

Q. And in this -- for this particular procedure, what would he be looking at in the microscope?

A. He'd be looking in the field as he removed the disk.

Q. So the use of the microscope is appropriate, the separate 09:34 fee in your mind is not; is that correct?

A. It's like the court reporter using a keyboard, I mean, it's part of what we do. I don't -- Again, we haven't charged separately for it since it became normal practice.

Q. And then there's a last one, a minor charge, 77003, which 09:35 Dr. Dagam testified to or described we use the term

"fluoroscope" for that. Are you familiar with that?
A. Yeah, fluoroscope is, you know, the radiology -- the radiology technician brings in a machine, they flash an image and we say, oh, good. We don't bill for that. That's not considered normal billing for our purposes anyways. It may be for other things, for example, interventional pain people who are doing a procedure under fluoroscopy is a much bigger issue, but it -- our billing people, billing people just don't do that.
Q. So do you have an opinion whether or not this Dr. Dagam and his physician's assistant's fees in this case were reasonable for the surgery that they performed?
A. They are quite unreasonable.
Q. Now, in regard to the surgery itself, do you have an opinion as to whether or not it was successful for the purpose it was offered, that is to ameliorate the pain from which Ms. Gard indicated she was suffering?
A. Well, the message I get from the deposition Miss Gard offered and from Dr. Dagam's records that it was marginally helpful. Twenty percent improvement is not improvement. It's meaningless.
Q. When you refer to 20 percent, that was Dr. Dagam's official line that there was 20 percent improvement; is that correct?
A. Yes.

Q. Why is that meaningless?
A. It's not enough to make a difference in somebody's life. We have a principle in the scientific literature, in the medical literature called minimum -- well, I won't bother you with the term, but the minimum amount of improvement that we consider to be really improvement based on, you know, again based on millions of cases, and unless it can restore an individual to a quality life doing what they were doing, it's not successful. And if indeed that is the goal. I mean, if the goal's to get somebody out of a wheelchair and you don't get out of a wheelchair, you didn't meet your goal. You may have tried, but you failed. Then the question becomes was it an acceptable attempt?
Q. Now, postsurgery under these circumstances, would you have recommended that Ms. Gard once again undertake physical therapy?
A. Absolutely.
Q. And why is that?
A. Because she was coming around -- You know, there are a number of patients who have anterior cervical fusions who have acute radiculopathy, that is, they have an acute herniated disk and they have surgery and their arm pain goes away and they don't need therapy, I mean, they don't. There are a few of them, not a lot. But in her case where there was lingering and a lot of lingering neck pain where she wasn't really making the

09:37 kind of progress we would hope for, therapy would be very, very useful.

MR. PAWLAK: Thank you. I move those exhibits that haven't been moved into evidence yet into evidence, which would 09:38 be 1003, 1004, 1009, 1017, 1021. The CD itself is 1023, and the guidelines are 1029.

THE COURT: Any objection?

MR. KNOBLOCH: Can you repeat those one more time?

MR. PAWLAK: Yeah. It's 1003, the CD; 1004, that's 09:38 the actual report; 1009 is the x-ray; 1017 is the MRI; 1021 is the x-ray of the cervical spine postsurgery -- postaccident, I'm sorry; 1023 is the CD, which had the MRI and actually has all the other images on it also; and 1029 are the guidelines.

MR. KNOBLOCH: No objection.

09:39 THE COURT: All right. They're all received.

(Exhibit Nos. 1003, 1004, 1009, 1017, 1021, and 1023 were received into evidence.)

THE COURT: Mr. Knobloch, cross-examination.

MR. KNOBLOCH: Thank you.

09:39 CROSS-EXAMINATION

BY MR. KNOBLOCH:

Q. I want to start with, Doctor, kind of your role in this proceeding. You were retained by, in this case, the Government to provide independent opinions based upon your review of the 09:39 medical records; is that accurate?

09:39 A. Yes.
Q. You've done this type of work in the past going back several decades and working for both the Government and auto insurance companies; is that accurate?
09:40 A. Not a lot. I did one previous case with the Government about -- in fact, I looked it up, six years ago, five years ago.
Q. You've been retained as an expert in medical malpractice cases; is that accurate?
09:40 A. Three or four times over the decades.
Q. You understand in this process that your review of the medical records is an important process, correct?
A. I do.
Q. You understand that part of your review of the medical
09:40 records both in a general sense and in this specific sense is to review medical records that predate an accident or an injury; is that accurate?
A. Yes. I insist on it.
Q. You did that in this case, correct?
09:40 A. I did.
Q. So you asked for medical records predating this March, 2017, accident and you actually received those; is that true?
A. I reviewed records. I can't say I reviewed every single
09:41 record she ever had, but I reviewed some records from before

the crash.
Q. You reviewed all the records that were provided to you in this matter, correct?
A. Yes.
Q. Can we agree that in your review of those medical records there is nothing to indicate that Miss Gard had any neck problems prior to this accident?
A. To the best of my knowledge she had no neck problems prior to the crash.
Q. To the best of your knowledge in your review of those medical records predating this accident she never sought medical care for any sort of neck pain; is that accurate?
A. To the best of my knowledge, that's correct, yes.
Q. All of her neck problems started after this accident, correct?
A. Yes.
Q. I want to address Dr. Dagam for a while, Doctor. You're aware of Dr. Dagam as a neurosurgeon in the community, correct?
A. Vaguely, yes.
Q. Can we agree that neurosurgeons doing any surgery in particular can charge whatever they want for a particular service?
A. No, I disagree. I strongly -- We've had this discussion in the deposition. No, we have -- we have fee schedules, we have principles that are -- well, we can talk about this all

day long, but relative value units, RUV's [sic], that are determined on the basis of not only the difficulty of the surgery, the expertise required, the risks involved, as well as the other care provided, and -- and in the organizations, in the neurosurgical organizations as in other professional organizations we have a -- a quasi agreement to kind of be in a range. It doesn't mean that healthcare costs don't -- aren't different in different parts of the country, they are, but not dramatically so.

Q. I just want to make clear your opinion. Are you telling this Court that a neurosurgeon in, I'll say, Waukesha is prohibited from charging whatever he wants from --

A. No, I'm sorry, if that's what I said, nobody's -- Prohibited is a strong word. We live in America. Well, a lot of things are prohibited. But it is considered, what is the term I'm looking for, I'm having trouble coming up with the word. Just ain't right, I guess, to be off. And then the question becomes, and there are others who are more -- yes, I do have an MBA, but there are others who would say, is this individual charging the same under these circumstances they would if this -- send the same bill for this one as if it were a Medicare case, or a private insurance case.

In other words there are those who would argue that what's called strategic billing is unacceptable. According to the rules of the American Association of Neurological Surgeons.

That is, you can't send a bill of $100,000 for a cervical fusion for someone who has a liability case and $18,000 to a United Healthcare patient.

So you can put it any way you want to on a piece of paper, whether it's legitimate or not is another story. And whether it falls into what -- what the neurosurgical and orthopedic community feels is being acceptable is also questionable.

Q. I want to make my question and your answer clear. In this case nothing prohibited Dr. Dagam from charging what he did for the cervical fusion; is that accurate?

A. Is there a law that says you can't? No.

Q. And he actually did charge a lot of money for his surgery, can we agree on that?

A. I use the term "outrageous".

Q. But he actually did bill for that surgery and billed it to Miss Gard as far as you can tell, can we agree on that?

A. Well, according to this thing he billed it to Golden Rule Insurance Company, whatever that is, but ultimately he billed it to her.

Q. So regardless of what you think is reasonable or usual and customary or within the standard of practice within the neurosurgeon practices or groups that you know of, regardless of what that fair and reasonable is, in your mind he actually did bill a little over $101,000 for the fusion that he performed, true?

09:45 A. He did bill that, yes.
Q. And you don't blame Ms. Gard for that, do you?
A. Not at all.
Q. Because as a consumer of the medical service -- services,
09:46 she has no idea what the actual billed amount is going to be either before she has that surgery or likely even after she has the surgery; is that true?
A. Unfortunately consumers do not -- healthcare consumers do not consume wisely.
09:46 Q. So you don't blame Miss Gard for being overcharged for a surgery, correct?
A. I do not.
Q. While we're on that topic, the operative report at the time stated that a surgery was done that in your opinion was
09:46 not done, true?
A. It is absolutely certain that it was not done.
Q. You don't blame Ms. Gard for that, do you?
A. Not at all.
Q. She had no role in the exact procedures that Dr. Dagam
09:46 decided to do or in how he billed it throughout the course of the surgery, true?
A. You are absolutely correct.
Q. Just to highlight that point, you talked about the stealth, you talked about the microscope and the fluoroscope
09:47 and generally speaking were critical of Dr. Dagam for billing

those procedures. My question is you have no criticisms with respect to Ms. Gard and Dr. Dagam billing for those procedures, correct?

A. None.

Q. If we agree that Dr. Dagam charged too much and perhaps charged for a procedures or processes that he didn't do, Ms. Gard is simply an innocent victim in that circumstance, correct?

A. Yes.

Q. With respect to Miss Gard not receiving any improvement or de minimis improvement of 20 percent, if that's accurate, postsurgery, that's also something in your mind that Miss Gard was simply an innocent victim of, can we agree on that?

A. I think at some point patients have to take control of their destiny, and I would encourage her to pursue things that would -- would improve things further. How's that for an answer?

Q. I think you're referring to physical therapy?

A. And other -- And other procedures, yes.

Q. Can we agree that if she were to under do -- undergo physical therapy at this point it's probably not going to eliminate her neck problems?

A. First of all, I never use the term "eliminate" when it comes to pain. I did 13,000 operations. I can assure you none of them was ever a hundred percent eliminated with anything. I

think that physical therapy and other nonoperative care would likely be helpful.

Q. It's not going to make all of her pain go away, can we agree on that?

A. I think it will make her substantially better, enough that I think she has a good chance of being better enough that it ceases to be an issue in her life.

Q. And just to be clear, that's if she were to undergo physical therapy at this point?

A. Not limiting it to physical therapy. You are, I'm not.

Q. Okay. You're including chiropractic care?

A. I think so, yes.

Q. Chiropractic care, as far as you can tell from the records, has never been recommended for Miss Gard, has it?

A. It has not.

Q. Back to the billing for just a moment. You're aware that -- Well, I'm going to strike that.

You're aware that neurosurgeons and surgeons in general throughout this community and other communities sometimes charge more than others, correct?

A. I think we're pretty standard throughout the community. There are certain surgeons who at least in the spine world who have gone out there and Dr. Dagam obviously in this case is one of them, but most of 'em are pretty -- most of us are pretty comparable, and, of course, that's largely defined by the

payors.
Q. Is that also defined by the institution that you're working for, for instance, you during your career you were a faculty at the Medical College and did your work at Froedtert Hospital, whereas in that context you're constrained to billing what the institution deems as correct; is that accurate?
A. No, that is not the way how it works. We develop a fee schedule based on the usual and customary. The number of RVU's, relative value units, that are required for the procedure.

We then, we definitely look at what other people are charging for the same thing in the area. And then, of course, can negotiate contracts with the payors. The goal is to be -- Because of who we are, we were certainly higher than average, but not outrageously so. But no one's -- In other words it's based more on a standard that pervades the community than some arbitrary number that we pick out of a hat.
Q. I want to go through the treatment that Miss Gard received after the accident. I think we can agree that after the accident her developing neck pain as a result of whiplash would've been a common circumstance? I know you don't like that term "whiplash".
A. We don't use it. Again, it's pejorative. I would be surprised if she didn't have some sort of neck pain after a flexion-extension injury like that.

09:52 Q. And assuming she did, which the records indicate that she did, going to an Urgent Care a couple days later was a reasonable option for her?
A. Yes.
09:52 Q. And that Urgent Care physician, if they referred her to her primary care physician for further follow-up, that's a reasonable thing to do?
A. Yes.
Q. The primary care physician at that point recommending
09:52 physical therapy is a reasonable thing to do?
A. Yes.
Q. There was the discussion about physical therapy and Miss Gard's inability to go to all of those. You're aware that she was unable to make all of her physical therapy
09:52 appointments, correct?
A. I'm aware that in several of the therapy notes it says that she cannot come to therapy because of her work schedule.
Q. In your experience dealing with patients, that's life, that happens sometimes, correct?
09:52 A. We've generally been able to work it out with evening hours and things like that. Part of it has to do with motivation and part of it has to do with availability.
Q. You told me in your deposition that you weren't critical of Miss Gard for not being able to make all of her
09:53 appointments. Is that still your opinion?

09:53 A. You know, if someone works 8:00 to 4:00 and therapy's only available 8:00 to 4:00, we got a problem, and the employer's not willing to let you go, we got a problem. So I can't criticize her if indeed that's the case.

09:53 Q. I took your deposition in this matter a month or so ago; is that true?

A. I don't remember the date, but yes, you did.

Q. And you know how this works, there's a transcript of that deposition testimony and we can go back and look at the words

09:53 that you said under affirmation at that time, right?

A. Yes.

Q. You told me back then that your opinion was that she suffered several injuries in this accident, and I want to see if we can agree on those today without the need to go back to

09:54 your deposition transcript. You told me that Miss Gard suffered a cervical muscular strain in this accident. Is that still your opinion?

A. Yes. I would say myofascial syndrome, but it's the same thing. Yes.

09:54 Q. You told me back then that in your opinion Miss Gard suffered a facet joint injury. Can we agree upon that today?

A. I wouldn't use the term "injury", I would say "syndrome" because that's -- I'm sure that is the term I used, and I -- that's exactly what I've said before. Yes.

09:54 Q. Facet joints, we've talked about that. That's the sides

and I know you're going to correct me on that, but it's the sides of the vertebrae; is that accurate?

A. Yeah. It's the articulating joints of the vertebrae. Yes.

Q. Miss Gard suffered a cervical strain or a myofascial injury and also a facet joint injury which you call facet joint syndrome. Do we have that squared away?

A. Well, we have to be careful. We can't say injury because injury implies fracture. There's no fracture.

Q. But pain was emanating from the facet joint region, can we agree upon that?

A. Yes.

Q. Right. You told me in your deposition awhile back that regardless of the physical therapy that she did or that she was supposed to do had she not had work problems, that she was still going to have pain emanating from the facet joints as a result of this accident. Can we agree upon that today?

A. I'm not sure I used those exact words. I -- What I think I would've said is I would be surprised if she didn't still have some -- some residual pain.

Q. And to be clear, if she underwent all of the physical therapy that was suggested to her by her primary doctor and the physical therapists, it is your opinion she was still going to have facet joint pain, correct?

A. Yes.

Q. To take that further, had she done all that physical therapy and done the medial branch block injections and the radiofrequency ablations, she was still more likely than not going to have that facet joint pain, true?
A. I would suspect that she would have some, again, the goal is not complete relief because it's unrealistic. The goal is to make it better enough so it ceases to be an issue.
Q. And there's a degree of speculation in how she would've been and to what degree she would've still had pain, true?
A. I think -- Speculation? My opinions are to a reasonable degree of medical probability, and I'm comfortable saying that to a reasonable degree of medical probability that she would've gotten better enough such that it would cease to be an issue in her life. That's been my experience with tens of thousands of patients running five spine clinics.
Q. I guess there's always a degree of subjectivity when you talk about how it would've interfered with someone else's life, though, true?
A. That's true.
Q. In the entire spectrum of her care, it was reasonable for her to go to the Urgent Care, to her primary doctor, to physical therapy, and to the pain management specialists, true?
A. Yes.
Q. You're not providing any opinions with respect to the adequacy or inadequacy of the billing that was done through the

09:57 pain management course of treatment, true?
A. I don't have enough familiarity with it.
Q. So you're offering no opinions in that regard?
A. That's correct.
09:57 Q. Doctor, you told me that you have been retained a handful of times, I think you said, to provide opinions in medical malpractice cases; is that accurate?
A. Yes.
Q. And I don't mean this in a disrespectful way, I'm just
09:58 trying to lay a foundation. You have also been sued several times for medical malpractice, correct?
A. I was sued in --
MR. PAWLAK: I'm going to object as to relevance.
THE COURT: Relevance?
09:58 MR. KNOBLOCH: Your Honor, we're just trying to lay a foundation that he is well aware of the standard of care because he has been highly critical of Dr. Dagam in this matter.
THE COURT: Overruled.
09:58 BY MR. KNOBLOCH:
Q. You may answer, Doctor.
A. I was really sued twice, once in 1998 for a hospital drug error, and -- it was expunged, and then I was sued in 2016 for a serious error that I made in a case. We settled that.
09:59 Q. My question in that regard, Doctor, is you're aware of the

09:59 standard of care, that phrase, correct?
A. I am. Well aware.
Q. And the standard of care is what doctors should always strive to achieve in their practice?
09:59 A. Standard of care is a minimal standard. It's not a maximal standard. That's not what we're striving for. That's the minimal acceptable.
Q. And if a physician falls below the standard of care, in your mind that's malpractice, correct?
09:59 A. Not in my mind. That's a legal opinion. I'm not a lawyer. Falling below the standard of care when it hurts a patient is malpractice.
Q. You've given opinions on standard of care when you were retained as an expert in medical malpractice cases, correct?
09:59 A. I'm thinking back, because again I don't do much of that, but at least in two or three of the cases when I was retained I was retained for a Frye hearing, not in -- not standard of care.
Q. Okay.
10:00 A. I mean, to establish the scientific basis for what happened. I think that's a Frye hearing, isn't it? Yeah.
Q. Sounds correct. In your 45 years of experience, you're familiar with the standard of care is with respect to neurosurgical procedures?
10:00 A. Procedures, yes.

Q. With respect to anterior cervical decompression infusion, a CDF, you're familiar with the standard of care in that regard?
A. Yes.
Q. And you're familiar with the standard of care with respect to a neurosurgeon's decision on whether or not to operate; is that fair?
A. That's not a standard of care issue. Standard of care issue is the care provided, in other words the technology provided. The decision making falls into a whole 'nother area. And -- And so I would say this. That doesn't fall into it, the rigidly defined standard of care, but it's sort of allied to it. Part of the decision-making process.
Q. Certainly a neurosurgeon can fall below the standard of care in his or her decision making on whether to undertake a particular surgery, correct?
A. I would think so.
Q. I'm going to pull you in here to Dr. Dagam. I think it was your strong opinion that -- that you believe is supported by the literature that a neurosurgeon should very rarely, if ever, do a cervical fusion for strictly axial pain. Is that an accurate synopsis of your opinion?
A. I think that's the opinion of the aggregate spine surgery world.
Q. And when Miss Dagam [sic] appeared in Dr. Dagam's office,

10:01 as far as you can tell in the records, she simply presented with axial pain, true?
A. Yes.
Q. No other complicating factors, neurological factors, anything else in that regard, correct?
10:01 A. No myelopathy, no radiculopathy. Correct.
Q. In that sense surgery was not indicated for Miss Gard at that point, can we agree on that?
A. Yes.
10:02 Q. And the surgery that Dr. Dagam ultimately performed was an unwarranted surgery at that point, can we agree on that?
A. According to the literature, yes.
Q. Can we agree upon -- Strike that. Can we agree that Dr. Dagam did an unnecessary surgery on Miss Gard?
10:02 A. See, we get a little complicated. He viewed it as being useful. Again, the spine surgery world would view it as being unnecessary.
Q. And that's supported by the literature in your regard --
A. That's supported by --
10:02 Q. -- or in your opinion?
A. Excuse me. -- by the guidelines.
Q. Can we agree that Dr. Dagam fell below the standard of care in his decision making and in his ultimate decision to perform a cervical fusion on Miss Gard?
10:02 A. Again, I'm going to hesitate to answer that the way you've

asked it because I'm not sure there's an identified standard of care for -- for cervical fusion for this indicator. All I can say to you is what I quoted you before. The literature and the guidelines and the standard teaching practice is that we do not do cervical fusions for isolated axial pain in the absence of instability for spinal cord compression. Period.

Q. And what you just described there, Doctor, is the standard of care, wouldn't you agree?

A. You're -- I'm reluctant to use that term. Just because I don't -- I don't see anything written somewhere that the standard of care is. How's that for -- I just can't do it.

Q. You believe Dr. Dagam fell below the standard of care in any regard, Doctor?

A. I'm sorry?

Q. Do you believe Dr. Dagam fell below the standard of care in anything he did in this case?

A. Well, is billing part of the standard of care?

Q. Leave the bill out for a moment, if you could.

A. I mean, the operation here looks -- the results of this procedure that he did looks fine. I have no criticism of the decompression, I have no criticism with the placement of the plate or the gravity.

Q. In your opinion it's a surgery simply that should've never been done, correct?

A. It -- That's correct.

10:04 Q. Certainly there are situations where you can imagine if a surgery is done that the particular surgeon who decided to do it fell below the standard of care in their decision making, right?

10:04 A. Yes.

Q. And can we agree that that's what happened in this case, Doctor?

A. Again, I'm not going to let you use the word "standard of care" with me, but I don't think his decision making was

10:04 appropriate for this particular instance based on the literature and based on training add experience.

Q. Is part of your hesitancy, Doctor, the fact that you're under oath and I'm essentially asking you to opine on whether or not another physician committed malpractice?

10:04 A. I don't know that it's malpractice to do a surgery that isn't indicated. I'm not a lawyer. That's a legal issue, not a medical one.

Q. You would never recommend one of your residents to do a surgery that wasn't indicated, correct?

10:05 A. Slap 'em in the face.

Q. And just a last question on this point. If you were in Dr. Dagam's shoes at the time where he made the decision to do the surgery, you would've said, no way?

A. I would've sent her back to Dr. Ong to get the rhizotomy

10:05 and sent her back to therapy. I've said that before.

10:05 Q. Doctor, you are aware that Miss Gard eventually was seen by a pain management interventionist by Dr. Ong, correct?
A. Yes.
Q. In your mind was it reasonable for Dr. Ong to do the
10:06 procedures that he did?
A. Very much so.
Q. It's common in your practice, Doctor, to see patients that have gone from a primary care physician to a pain management specialist and then to you as a neurosurgeon, correct?
10:06 A. Yeah.
Q. You're not critical of Miss Gard for receiving care from a pain management specialist, true?
A. No.
Q. Miss Gard testified yesterday that it was Dr. Ong who
10:06 referred her to Dr. Dagam. Do you have any reason to dispute that?
A. I -- I have no reason to dispute that at all. I have no idea.
Q. Assuming that's true for a moment, it was reasonable in
10:06 that -- Strike that.
Assuming that's true, in your opinion it's reasonable for Miss Gard to have relied upon the referral from Dr. Ong to Dr. Dagam, true?
A. I have no criticism of her for following through on that.
10:07 Q. I looked through the records, and it seemed that there

were seven or eight visits with Dr. Dagam that Miss Gard had prior to the surgical recommendation. Does that jive with your recollection?

A. I'm sorry, I don't recall -- I can't give you a number, but I don't recall that many.

Q. Let me try it this way. There were several visits that Miss Gard had with Dr. Dagam where the conversation was other things and not let's have surgery, true?

A. There were at least two that I can recall.

Q. In those records it was Dr. Dagam who initially said, paraphrasing, you're not ready for surgery, you should continue on with your treatment with Dr. Ong. Do you recall --

A. I do recall him saying that, yes.

Q. And you're okay with -- with that from Dr. Dagam at that point, correct?

A. Absolutely.

Q. You're aware that at some point Dr. Dagam told Miss Gard, now I believe you're a candidate for surgical intervention, true?

A. Yes.

Q. You're aware at some point that Miss Gard agreed to have the surgery, correct?

A. Yes.

Q. It's common for patients to rely upon the expertise and experience of their physicians when it comes time for surgery

and decision making with respect to that surgery, right?
A. Yes.
Q. You're not critical of Miss Gard for relying upon the experience and expertise and recommendation of Dr. Dagam, are you?
A. Not at all.
Q. In that sense, Miss Gard's decision to go through with the surgery that you deemed to be an unwarranted and unnecessary surgery, in that sense she's just another innocent victim in that sequence, correct?
A. I hesitate to use the word "victim", but she is a participant. Yes, she followed through with the -- that physician's recommendation.
Q. And it was reasonable for her to do that at that time?
A. Yes.
Q. Last question on this point, Doctor. Throughout her sequence of treatment, Miss Gard reasonably relied upon her doctors throughout the course of her treatment up and through the surgery, true?
A. There were a couple times when she told 'em no. If I recall correctly, Dr. Ong, and I could be incorrect, and I apologize if I am, she did not follow through on the rhizotomy, although she did have the medial bundle branch block. I, frankly, wish she had. She didn't follow through on the epidurals, which was wise. She was less than robust in working

10:10 with the therapists, you know, but that takes awhile, especially right after injury.

Q. Throughout the course of your decades of practice, Doctor, have you encountered patients that go through a series of
10:10 treatments and perhaps even a surgery and they don't get a whole lot of relief and at the end of that they throw up their hands and say, to heck with all of this, I'm done with all of this, you guys haven't done anything to alleviate my pain in any meaningful sense?

10:10 A. Absolutely.

Q. That happens, right?

A. More often than not.

Q. Did you get a sense from reviewing the records that that's kind of where Miss Gard is at after having a cervical fusion
10:10 that didn't much help her?

A. I get that sense.

Q. Doctor, I'll represent to you that Miss Gard's primary care physician at the early stages after this accident was a doctor by the name of Dr. Swift-Johnson. I assume you don't
10:11 know Dr. Swift-Johnson, true?

A. No. I do not.

Q. Well, I'll represent to you that she is an Aurora doctor.

A. I know. I know that much. Yes.

Q. And I'll represent to you that Miss Gard's physical
10:11 therapy was through an Aurora clinic.

10:11 A. Yes.
Q. And in the context of your practice with Froedtert and the Medical College, if you referred someone to physical therapy and it was done through a Froedtert facility, when that patient
10:11 returned to you, you would have full access to all of those physical therapy notes, correct?
A. Yes.
Q. And that's a common phenomenon within the medical practice that if you're within an institution, say Froedtert or Aurora,
10:12 you have access to that particular patient's entire medical history within that institution; is that a common practice?
A. It's actually beyond that. With Epic we pretty much have access to everything.
Q. So to my question, when Miss Gard returned back to her
10:12 primary care physician through Aurora at the end of her physical therapy treatment, you would expect that physician to have access and knowledge of all of the physical therapy records that were generated throughout the course of her treatment, true?
10:12 A. Access, yes; knowledge, can't testify to that. I don't know if she ever looked at 'em. We have no way of knowing.
Q. Sure. But had she looked and prepared to have Miss Gard in, she would've had access to all of the physical therapy records, correct?
10:12 A. She would've had access.

Q. Whether she looked at 'em would be pure speculation on your part?
A. That's correct.
Q. Yesterday for a couple hours counsel went through almost each physical therapy note with Miss Gard, and as part of her response as to the general question of why didn't you go to therapy that day, part of her answer was, I wasn't getting any relief from the physical therapy. My question to you, Doctor, is that sometimes happens, correct, that a patient that you refer to physical therapy is simply just not getting relief from the physical therapy?
A. Correct.
MR. PAWLAK: I'm going to object to the question on the grounds that I believe a more accurate recitation of what she said was the relief was temporary, not that she wasn't getting any relief.
THE COURT: The fact finder is aware of what the testimony was and will weigh that. Thank you. You may continue, Mr. Knobloch.
MR. KNOBLOCH: Thank you.
BY MR. KNOBLOCH:
Q. The same question, because I think counsel is accurate that some of the -- her testimony was along the lines of I wasn't getting any relief and I think what she was really saying was I was receiving temporary relief but then it would

wane in the next couple days. Is that a common phenomenon in patients that you refer to physical therapy?

A. Depends on what you're referring them for and what the therapists are doing, so, you know, that's the answer. There are certain therapy moves that really only work for a day or two. Sometimes those -- those techniques are used specifically to reduce pain temporarily so that patients can do their home exercise program.

Other times, frankly, they're done because, you know, therapists want people to get better too, and they like it when people leave happy, and unfortunately there are certain techniques that are very common in the therapy world that don't produce meaningful improvement. They have evidence based standards of care just like we do. And there are things that work better than other things on a longer term basis. So often the goal is to do temporary things to inspire the ability to do the longer term things.

Q. In your review of the records, it appears that Miss Gard's testimony yesterday, it jives with the records that she was receiving temporary relief but not permanent relief. Can we agree on that?

A. I think that's true.

Q. Miss Gard testified yesterday to a large degree about her ongoing problems, and I'm going to paraphrase. She has consistent neck pain that manifests in tension and a very

significant tightness that goes from her neck down into her shoulder blades. Assuming that's true, what do you attribute that to, Doctor?

A. I think there's -- it's the exact same stuff she had since she had the injury. I think there's continuing muscle spasm from -- from muscle weakness, if you will, due to injury as well as the facet syndrome. Nothing has changed.

Q. To be clear, those problems that I just described in your mind are largely coming from the facet joint syndrome that you've testified to earlier?

A. I can't break down a percent and between the muscles and the facet, but I'm sure it's a combination of the two.

Q. Miss Gard testified that when she turns to her right, there is some crunching. Assuming that to be true, what do you attribute that to?

A. We all have that as we get up there. That's a facet thing. I can do it right now for you if you like.

Q. There was a term used yesterday, and it perhaps was used today, degenerative disk disease. DDD is what you see in the medical records, and I've heard that from doctors as being a misnomer because it's not really a disease, it's just a degeneration of the cervical spine. You're shaking your head. Are we in agreement?

A. We're in absolute agreement. It's not a disease, it's a phenomenon. Again, most of the time it's asymptomatic, as I

discussed earlier, it's just a convenient way of talking.
Q. I've heard plenty of neurosurgeons say that most people over the age of 40 have some degree of degeneration going on in their cervical spine, whether they know it or not. Is that accurate?
A. As I said earlier in this testimony, that's absolutely true.
Q. There's plenty of people walking around with a significant state of degeneration going on in their neck and they have no idea because it's not causing them any problems, true?
A. Correct.
Q. And then there are people with that degree of degeneration in their neck and they get in a car accident and now they have problems with their neck, true?
A. Yes.
Q. Common parlance that we use is now they've had an aggravation of an asymptomatic condition. Is that a fair way of phrasing that?
A. I think that's fair.
Q. And that is -- is that a fair way of phrasing what happened to Miss Gard in this case?
A. Yeah, I believe that. Yes.
Q. You've seen that plenty in -- throughout your 45 years of practice, true?
A. Of course.

10:19 Q. We can agree that on the day of the accident Miss Gard had a level of degeneration going on or having already undergone in her neck, true?
A. As previously stated.
10:19 Q. And you have no evidence to suggest that that degree of degeneration, whatever degree it was on the day of the accident, was giving her any problems whatsoever prior to the accident, true?
A. She certainly never had any treatment or complaints for
10:20 it.
Q. Doctor, I see this sequence of treatment for Miss Gard in a certain way and I want to see if you see it that way. But for this accident she would've never gone to her physical therapist -- Strike that. But for this accident she would've
10:20 never gone to her primary doctor complaining of neck pain when she did. Do you see that -- see it that way?
A. Did you say when she did?
Q. Correct.
A. Yes.
10:20 Q. And but for this accident she would've never seen Dr. Ong for neck complaints when she did, correct?
A. When she did, correct.
Q. And but for this accident, she would've never been seen by Dr. Dagam when she was, correct?
10:21 A. Yes.

Q. And but for this accident, she would've never seen Dr. Dagam and therefore Dr. Dagam would've never recommended surgery when she did, correct?
A. That's correct.
Q. But for this accident, she would have never undergone the surgery that Dr. Dagam performed when he did it, true?
A. Yes.
MR. KNOBLOCH: That's all I have, Your Honor.
THE COURT: Thank you. Let's take about 15-minute break so we could not be so cruel to our court reporter. Dr. Maiman, if you will please remain, I have a couple of clarifying questions for you.
THE WITNESS: Yes, ma'am.
THE COURT: Thank you, everyone.
MR. PAWLAK: I also have some redirect.
THE COURT: All right. We'll do that. Let's take a 15-minute break, and we'll do that.
MR. PAWLAK: Thank you.
(A recess was taken.)
THE COURT: Please be seated. We're back on the record. Mr. Pawlak, redirect?
MR. PAWLAK: Thank you, Judge.

REDIRECT EXAMINATION

BY MR. PAWLAK:
Q. Dr. Maiman, on cross-examination plaintiff's counsel asked

you a couple questions based upon the testimony of his client yesterday, describing some symptomology which she was suffering from pain in her neck. Based upon that new information as well as your complete knowledge of the record, if you were Miss Gard's doctor at this time or part of her treatment team, what would you recommend for her?

A. Right now?

Q. Right now as we sit here.

A. I would recommend an aggressive transdisciplinary nonoperative program, incorporating physical therapy for -- for stabilization, strengthening of the neck muscles, chiro -- a brief course of chiropractic treatment, and a strong consideration for redoing the facet blocks and facet rhizotomy.

Q. And just for the record, the rhizotomy is the one you believe she did not choose to partake in that procedure; is that correct?

A. I believe so.

Q. Can you explain what it is?

A. Basically when we -- there are little nerves inside the facet joints, and they can -- they can be associated by producing spasm. They produce pain by producing spasm in the muscles. They irritate -- The muscles get irritated when those nerves are irritated.

The blocks that Ms. Gard had gave her, according to the record, at least 50 percent relief. It's meant to be

temporary, and it was. But I can't see anywhere that she had the actual rhizotomies where they -- where they kill the nerves, if you will, was done, and I think at least that should be considered. It would have to be the blocks again, the medial branch blocks as they're called, with steroids, with cortisone, and then see if that works, and if that works, consider burning the nerves.

Q. So is the rhizotomy in the grand scheme of things reported to or at least or hoped to be permanent?

A. They're not permanent. They last for years, though. And if her muscles can get strong enough and healthy enough, if you will, and I'm being a little simplistic here, it's very likely that that will be the turning point, getting rid of that facet pain will be the turning point in allowing her to reduce the muscle pain dramatically.

Q. And how does she strengthen those muscles?

A. That -- A therapy program that emphasizes stabilization. You know, we're not talking about sticking needles in there, doing dry needling. We're not talking about massage. We're talking about a combination of certain kinds of exercise programs that are designed specifically for that purpose.

MR. PAWLAK: Thank you.

RECROSS-EXAMINATION

BY MR. KNOBLOCH:

Q. Doctor, this rhizotomy, I never saw that in the medical

records post her surgery. Did you?
A. No.
Q. As far as you know, Dr. Dagam has never recommended that one to Miss Gard, correct, post surgery?
A. He's never recommended anything after surgery.
Q. Miss Gard testified that she wakes up in the morning and does a daily stretching routine and does that throughout the course of the day. That's a good thing for her to do, correct?
A. It's minimally adequate, how's that for an answer? I mean, that's what she's got.
Q. If it provides her with some sense of relief throughout the day, then she should continue?
A. Oh, absolutely.

MR. KNOBLOCH: That's all I have, Your Honor.

THE COURT: Thank you. Dr. Maiman, I have a couple of questions. Most of them have been -- you've answered them through cross-examination and redirect, but I have a couple remaining.

EXAMINATION

BY THE COURT:
Q. My first question --

THE COURT: Mr. Pawlak, can you please put back up the 2017 x-ray? So kind of going back to the beginning, Dr. Maiman.

MR. PAWLAK: Yeah. Sure, Judge. There is the

March 27th, 2017, x-ray --

THE WITNESS: Those little boxes there -- Yes, Your Honor.

THE COURT: I'm going to come down to get a good view.

BY THE COURT:

Q. Dr. Maiman, you testified at the beginning of your testimony regarding this exhibit, which is the March, 2017, x-ray of Miss Gard after the accident; is that correct?

A. Yes, ma'am.

Q. I want to understand the significance of your testimony regarding this x-ray. You started out by pointing out to us that the spine was straight rather than curved as in a healthy spine. Can you clarify that testimony for me again and the significance of this?

A. Sure. So, again, there are -- the cervical lordosis as it's known generally is normal curve. There are three potential reasons why the spine is straight like this. Number one is she may have been born that way. And you hear about, you know, high school football players that wouldn't let 'em play because one of the standards is that they do a cervical spine x-ray to make sure that they have the curve. If they're straight they don't let 'em play because they're at much higher risk of injury with congenital straightness.

Reason number two is by far and away the most likely one,

10:44 that the wear and tear changes in her spine have not happened symmetrically, so if they happened at the same rate, so you get 10 percent here and 10 percent here, then the spine maintains its curve, but if you get a little more at certain levels where 10:44 the curve is at its most, or if it's asymmetric from the front to the back, the spine will straighten out and actually will even start to bend forward, which she's demonstrating. And none of these needs to be isolated from the other. They can happen in combination.

10:45 The third reason is that even if a perfectly healthy normal spine, the presence of muscle spasm because of the way the muscle's oriented will tend to straighten out the spine. So if -- if you ask me I'd say it's probably a combination of two and three. That she already had some -- a fair amount of 10:45 straightening just because she does have the wear and tear changes and in addition the muscle spasm pulls the spine back a bit.

Q. And the muscle spasms that you speak of, how does that relate to the accident?

10:45 A. Well, because when the -- when the neck is moved forward and backwards beyond the normal extension of the muscles, they get irritated and they go into spasm. That is part of the pain. I mean, that's the pain process. When you stress a biological tissue beyond its physiological range, its normal 10:45 range, that will produce damage to the tissue, and in this case

because the muscles have foraminal nerves in them, that will produce the -- The bone in and of itself doesn't have pain. It's the supporting structures of the bone that produce the pain.

Q. So what is the big test -- the big takeaway for me in regards to your testimony as it relates to the accident?

A. Okay. That as far as this image is concerned?

Q. Yes.

A. That it's a combination of the wear and tear changes in her spine have caused her spine to become straight, so that's part of the loss of disk space height and the changes in the joints, in the facet joints. That's part one, that there was preexisting degenerative changes in her spine with straightening, and loss of disk space height, and wear and tear on some of the facet joints as well as likely muscle spasm produced by the crash itself as a result of her forward and backward motion.

Q. Thank you. From the second slide, or the different perspective, Dr. Maiman, you had pointed out to us some boney changes that you had explained to us. If you could go over that for me?

A. Excuse me. I'm going to grab my model. My $31 Amazon model. I'm embarrassed.

So when we look at the anatomy of the cervical spine, we see that there are holes at every level of the spine. These

are the facet joints. There are holes at every level of the spine where nerves come out. These holes are called foramina. Foramen, which is Latin for hole.

And if there are changes in the joints where more commonly some old disk bulging that turns to calcium right here, that will narrow the hole for the nerve to come out. In this case we're looking at what is called an oblique view of the spine, it's like this. It's not a true lateral, it's like this. To emphasize the openings for the nerves.

So when we go C-1, C-2, C-3, and C-4, at C-5, 6 we see right here, and right here a bone spur, little bone spurs which are old bulging disks. Again, this is old stuff that is narrowing the space for the nerve to come out.

Q. And what, again, I'm going to ask the same question as I'm thinking about this accident and the injury, what's the big takeaway from this part of your --

A. It's irrelevant.

Q. Thank you, Dr. Maiman.

A. I just can't stop, you know.

Q. That's my job to figure out what is relevant to my decision making and what's not, so I wanted to get the testimony clear.

Dr. Maiman, the second area of clarification that I need help with is as to your testimony that Dr. Dagam's surgery was not appropriate. My question to you, and I believe you

10:49 testified regarding this, but I just want to nail it down for myself, the way I -- I'm thinking about that portion of your testimony is putting in context of my world, in law when we talk about reasonableness, we talk about it being a range or a
10:49 continuum and not just one point. In other words we could have a room full of judges and we may have different opinions, but so long as we are within the range of reasonableness, a range, a continuum will be reasonable. Is it your testimony then that Dr. Dagam's decision to perform this surgery on Ms. Gard was
10:50 outside of the range of reasonableness, or in your world, appropriateness?

A. So in preparation for this, I actually looked for scientific publications that validated operating for axial pain. I found roughly 219 saying no. I think it was 217. I
10:50 found two that said there may be some value in selected populations. And in those two papers, they qualified their statement by saying that they don't recommend this typically, but if under these certain very specific circumstances it may be helpful.

10:51 One of the reasons we've gone to the guidelines is, frankly, and I'm going to be very blunt with you, there's way too much spine surgery being done in this country. We have the higher -- higher incidents of spine surgery in the United States than anywhere else in the world. By far.

10:51 And it's not for money, it's because Americans like having

surgery. And I'm not being funny. So we've developed evidence based standards, in other words is there evidence that this is going to be helpful? Before a person undertakes something that can kill them or be harmful, where's the evidence to support, it and that's where these guidelines come from.

The people who did the guidelines on cervical fusion, I know many of them and at least one of them was one of my former trainees and one of them is a former colleague, they spent months and months and months reviewing the entire literature, using the best evidence that there is, and came to a conclusion based on the experience with hundreds of thousands of cases.

So the -- the room is very big, but you can get out -- you can get dangerously close to being outside the room, and -- and I'm very uncomfortable with this, obviously as Mr. Knobloch pointed out, but I would -- if something like this came up in one of our case conferences in the department I'd say, what were you thinking? Where did you get this from? And I can assure you that no residency program in the country is teaching residents to do cervical fusions for axial pain. And I'd be hard pressed, in fact, I mentioned the insurance company issue too because I find it hard to believe that an insurance company would approve it. Because it's out of -- it's just out of our stadium.

Q. Thank you.

A. I guess that's about as clear as I can be.

10:52 Q. Thank you. Going through the -- my notes here, Dr. Maiman. The next area I wanted clarification in my mind was the line of testimony and questioning regarding the billing. Dr. Dagam's billing. In testifying about billing, 10:53 you testified that you -- you neurosurgeons have a fee schedule, fee principle, there's a range; is that correct, Dr. Maiman?

A. Yes. And interestingly enough, while we were -- while we were on break I got an E-mail from one of my former fellows 10:53 who's a resident and fellow who's chairman at Cincinnati who's head of the RUC committee, which is a reimbursement committee. We work in concert with the industry and with -- and with the Government in establishing a fee schedule.

So they sent out a survey about a code that they want the 10:53 opinion of all the spine surgeons in the United States so we -- we have input into this stuff. Along with the healthcare economists and the Government officials. These are not arbitrary decisions on how things get paid. They include not only the technical nature of the procedure, but also the 10:54 expected work in evaluating and taking care of the patient and -- and the -- you know, the risks -- I mean, it's a whole number of factors that fit into this.

So in this particular E-mail, which I can show you later if you want to see it, say how much postoperative care do you 10:54 have to provide for this patient undergoing this surgery?

Because that is fit into the billing code.

Q. Dr. Maiman, my question about the fee schedule and fee principle, is this a -- is this a written document? Is this a handbook that I as a neurosurgeon can go to when I'm setting up my bills? Is it a website? Is this a publication?

A. All of the above. There are courses in coding, the double ANS -- American Association of Neurological Surgeons has a coding course, the Congress of Neurological Surgeons has a coding course, NASS is having one in two weeks. There are courses for coders. My -- Someone who worked with me for years taught coding at MATC, and there are documents for all this stuff on how things should be coded.

There are fee schedules that are available. The easiest one to get to, of course, is the CMS one, which is Medicare, and nobody -- I mean, Medicare pays ridiculously low, and what most insurers have done is they've gone to a percentage of Medicare. So, for example, last time I checked, United Healthcare was three times Medicare. That data is all available on-line, and there are courses and publications, yes.

Q. Thank you. And you also, I think, you used a word, there's community customs about billing, you testified to that. Is that correct?

A. Well, and part of that is determined by the payors. Because in Milwaukee, the most common -- the most common non-governmental payor is United Healthcare. If you want to be

10:56 a part of their panel, you have to accept their fee schedule. And, frankly, pretty much everybody is going to a common fee schedule, which represents a percentage times Medicare.

And so I would -- I would tell you that all of our 10:56 schedules are pretty much the same. There are some things that are written that are outside that, for example, assistant fees. Assistant fees for a surgeon are universally 25 percent for a surgeon, and for a P.A. or an N.P. assisting a surgery, a non-physician, a non-surgeon assistant, it's a little bit 10:56 lower. I don't remember the exact number; it was either 10 or 15 percent.

Q. Dr. Dagam testified yesterday that, and this is not a direct quote, but just globally, the way his office does billing is that he has an administrative assistant, a billing 10:57 person, who had set up the schedule some 20 years ago, and over time they have adjusted, I guess, for inflation, for market changes and just from knowing generally what other neurosurgeons are charging in the community. Does that ring correct to you how fees are set in -- for neurosurgeons?

10:57 A. The words fit, the schedule doesn't. I mean, the numbers that are on that billing form are unbelievably high, and there are things that we don't bill for anymore as I mentioned during my testimony.

I don't know -- I can't speak to the expertise of his 10:57 billing coordinator, I don't know where she got her data from,

but it's not -- it's not our U. and C., it's not customary. And ultimately I suspect the surgeon tells the billing coordinator what to bill, in that instance in his office. I can't speak to it because I can't imagine that those numbers come from any objective data.

Q. Thank you. You used the words unbelievably high, really high, staggering, quite unreasonable, and so on and so forth. This bill is about 100,000, let's just call it that. What would be a range of reasonableness in this community for such a surgery?

A. In this community it would probably be, on the high end it would be 20 -- maybe 25, 28,000 for a surgical fee. Maybe 30. If you look at reported ranges, and I actually did look this up, the highest I could find for an anterior cervical diskectomy and fusion of this type was $40,000.

Now, again, admittedly fees are a little bit higher in Wisconsin than they are in many other states, but I'm talking about in our range. I found lows of 15,000, and if I'm not mistaken, and I'm not, United Healthcare right now for a typical PPO individual is paying between 12 and 14,000, maybe actually 16,000 for this surgery.

Q. Going to switch topics on you now back to the reasonableness of the surgery. You opined that the surgery was not -- was unwarranted, unnecessary, and you also opined that the surgery was not successful because Ms. Gard only received,

10:59 I think, 20 percent -- 20 -- she only got to the 20 percent relief range. Dr. Maiman, do you wish to respond to that?
A. I do. So doctor -- the 20 percent is based on what Dr. Dagam wrote in his note. What I'm hearing today, and I
11:00 obviously wasn't here for Miss Gard's testimony, that she may have gotten that 20 percent just from changing jobs. I mean, I -- I am not in a position, it's clear that she did not get much improvement from the surgery at all.
Q. Thank you. I asked about that to set up this specific
11:00 question. So it's your testimony that the surgery was not successful, it's your opinion. Is it your opinion that the surgery in any way aggravated Ms. Gard's symptoms? Which is different than the first question that I had asked.
A. I'm under oath, right?
11:01 Q. If you know. If you have an opinion.
A. I always have opinions, Your Honor. Here's the issue with once you've had a fusion. Once you've had a fusion, you put people at risk for having another fusion. So because you've stabilized a segment of the spine, if she develops degenerative
11:01 changes, more degenerative changes at C-6, 7, it puts that segment at risk of producing pain. Am I making sense?
Q. Yes.
A. Because by doing a fusion at C-5, 6, you put more stress in C-4, 5 and C-6, 7. And so it could be over decades -- it
11:01 may be a long time, it might be decades, but it could

conceivably create wear and tear changes that produce more pain.

Q. Okay. Thank you.

A. But I don't think her pain syndrome now has anything to do with the surgery.

Q. Thank you. And I want to clarify in my mind, I -- you testified that as a result of the accident, Miss Gard suffered cervical muscular strain and facet joint syndrome; is that correct?

A. Yes.

Q. Okay. Anything else?

A. No, ma'am.

Q. Those two. Now, Miss Gard testified yesterday regarding what she's been experiencing since the accident. She testified about stiffness, limited range in motion in the neck, she testified about difficulty in getting comfortable to sleep, or waking up from being uncomfortable when sleeping because of the neck. Are those symptoms that I can reasonably expect to see with cervical muscular strain and facet joint syndrome?

A. Yes.

Q. Ms. Gard testified that with her neck situation, with the stiffness, that she is now unable to do some activities that she used to do, some physical activities like playing volleyball, softball. Are those limitations that I can expect to see with cervical muscular strain and facet joint syndrome?

11:03 A. I'm going to qualify that by saying they're not -- those activities are not dangerous to her, but they might aggravate her pain.

Q. Thank you.

11:04 THE COURT: Those are the areas that I needed some clarity on, Dr. Maiman, so thank you very much.

THE WITNESS: Thank you.

THE COURT: Mr. Knobloch, you are jumping at the seat to -- for anything else, very briefly, anything further? I'll 11:04 give the lawyers an opportunity to ask any questions that followed up from my questions.

RECROSS-EXAMINATION

BY MR. KNOBLOCH:

Q. Doctor, do you have your report in front of you? It's 11:04 Exhibit 1004.

MR. PAWLAK: Yeah.

THE COURT: Help the doctor, let him know which binder are we talking about.

MR. PAWLAK: It is binder Exhibits 1001 through 1006. 11:04 Under tab --

THE WITNESS: I have my report.

BY MR. KNOBLOCH:

Q. Is that in front of you, Doctor?

A. Um-hum.

11:05 Q. I want to turn your attention to the first paragraph on

page three, which is cut between page two and three, but the part I'm referring to is on page three. I'm going to read the bottom part of page two on and continue on into page three, and then just simply ask if I read it correctly.

In reviewing Dr. Dagam's report, which admittedly was issued shortly after the surgery, he suggests that Miss Gard was still recovering from her surgery, she is now more than one year postoperative and has demonstrated little, if any, improvement according to the records. Most series suggest recovery is maximized within six months, rather, as noted above surgery was of little value. While I cannot be specific as far as the cost he reports, the literature presents total costs ranging from USD, United States dollars, $35,000 to $70,000 for a single level ACDF. Did I read that correctly?

A. Yes, sir.

Q. It appears that the range of reasonable charge for a cervical fusion in your report is about a bit higher than what you testified to today; is that true?

A. I'm here, this says total costs.

Q. Correct.

A. Including hospitalization in this.

Q. I see.

A. And anesthesia.

Q. I see. And the assistant charge?

A. You know what? Most guys don't use an assistant for an

ACDF, although I'm not critical of it.

Q. Does that range include an assistant charge?

A. I -- I can't answer that. I don't know.

Q. All right. Your Honor went into it, and you talked about the billed amount versus the paid amount, and I understand we're getting into the nitty-gritty of the capitalist side of the practice of medicine, but as long as we're talking about it, let's -- let's do it.

Any physician that charges a particular amount for a particular surgery knows that they're not going to get a hundred percent of the dollar on what is billed, correct?

A. Depends on who they're billing in the State of Wisconsin.

Q. For instance, if a surgeon were to charge a hundred dollars for a procedure and Medicare is the payor or Medicaid is the payor, or United Healthcare is the payor, that physician knows that they're not going to receive a hundred dollars for that service, correct?

A. Exactly right.

Q. So the billed amount is always going to be different than the paid amount, correct?

A. No, that's not true.

Q. In most circumstances the billed amount is going to be different than the paid amount, true?

A. If there is a third-party payor, there's going to be a diminution of the payment typically, but in Workman's Comp in

Wisconsin and in liability cases, it's often not the case.
Q. In Workmen's Compensation cases typically a procedure is billed at, say, a hundred dollars and Work Comp paid a hundred dollars, true?
A. Correct.
Q. Right. And you're talking third-party liability cases where it may be, say, an auto accident, is that what you're referring to?
A. I'm saying cases like this one, yes.
Q. Okay. You don't know in this case what Dr. Dagam has received or what he will receive, true?
A. Well, I know what he has received because it's on this form that was handed to me today, but I've never known before that.
Q. You don't know what is still outstanding with respect to Dr. Dagam's billing, do you?
A. Only from this piece of paper in this exhibit.
Q. What exhibit are you referring to without talking about the contents, Doctor?
A. Nine.
Q. And it appears from this, Doctor, that the billed amount is a total of $101,527, and the paid amount at least per this document is roughly $860.78, true?
A. Yes.
Q. And that is the extent of your knowledge as to what

11:09 Dr. Dagam and his office has been paid on this 101 some thousand dollar bill, true?
A. That is correct.
MR. KNOBLOCH: That's all I have.
11:10 THE COURT: Thank you. Mr. Pawlak?
MR. PAWLAK: Just briefly.
REDIRECT EXAMINATION
BY MR. PAWLAK:
Q. The Court asked you a couple questions regarding this
11:10 symptomology that Ms. Gard expressed still be suffering from, and I think the point of the question was whether that could be attributable to the vehicular accident. I believe you answered yes; is that correct?
A. Yes.
11:10 Q. But even today, if I understand your testimony correctly, she would benefit from physical therapy and alleviating that pain?
A. I think she has a very good probability to get better.
Q. Very good.
11:10 MR. PAWLAK: That's all I have. Thank you.
THE COURT: Thank you, Mr. Pawlak, and thank you Dr. Maiman. Please have a good day.
THE WITNESS: Thank you. I can leave?
THE COURT: Yes. Yes. Yes.
11:10 (At 11:10 the transcript excerpt ended.)

C E R T I F I C A T E

I, THOMAS A. MALKIEWICZ, RPR, RMR, CRR, an Official Court Reporter for the United States District Court for the Eastern District of Wisconsin, do hereby certify that the foregoing is a true and correct transcript of all the proceedings had and testimony taken in the above-entitled matter as the same are contained in my original machine shorthand notes on the said trial or proceeding.

Dated this 29th day of April, 2022.

Milwaukee, Wisconsin.

Thomas A. Malkiewicz, RPR, RMR, CRR
United States Official Court Reporter
517 East Wisconsin Avenue, Room 236
Milwaukee, WI 53202

Thomas_Malkiewicz@wied.uscourts.gov

ELECTRONICALLY SIGNED BY THOMAS A. MALKIEWICZ
Official U.S. Reporter, RPR, RMR, CRR